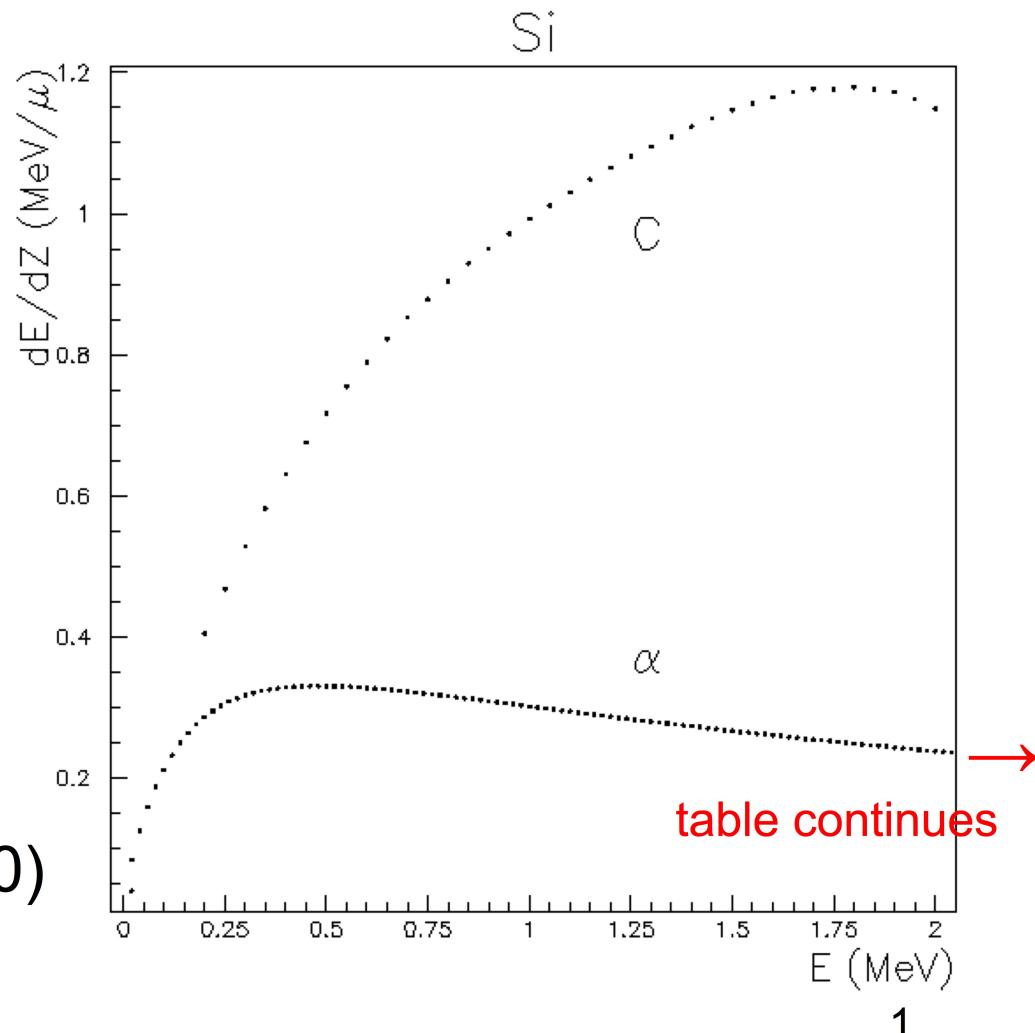


# $^{12}\text{C}$ & $\alpha$ energy deposition in Si

## dE/dz vs. E from measurements & parameterizations

- $\alpha$  in Si from NIST: <http://www.nist.gov/pml/data/star/index.cfm>
- $^{12}\text{C}$  in Si from D.C. Santry and R.D.Werner, NIM B53 (1991) 7  
(linked on <http://www4.rcf.bnl.gov/~cnipol/Documentations/Documentation.html>)

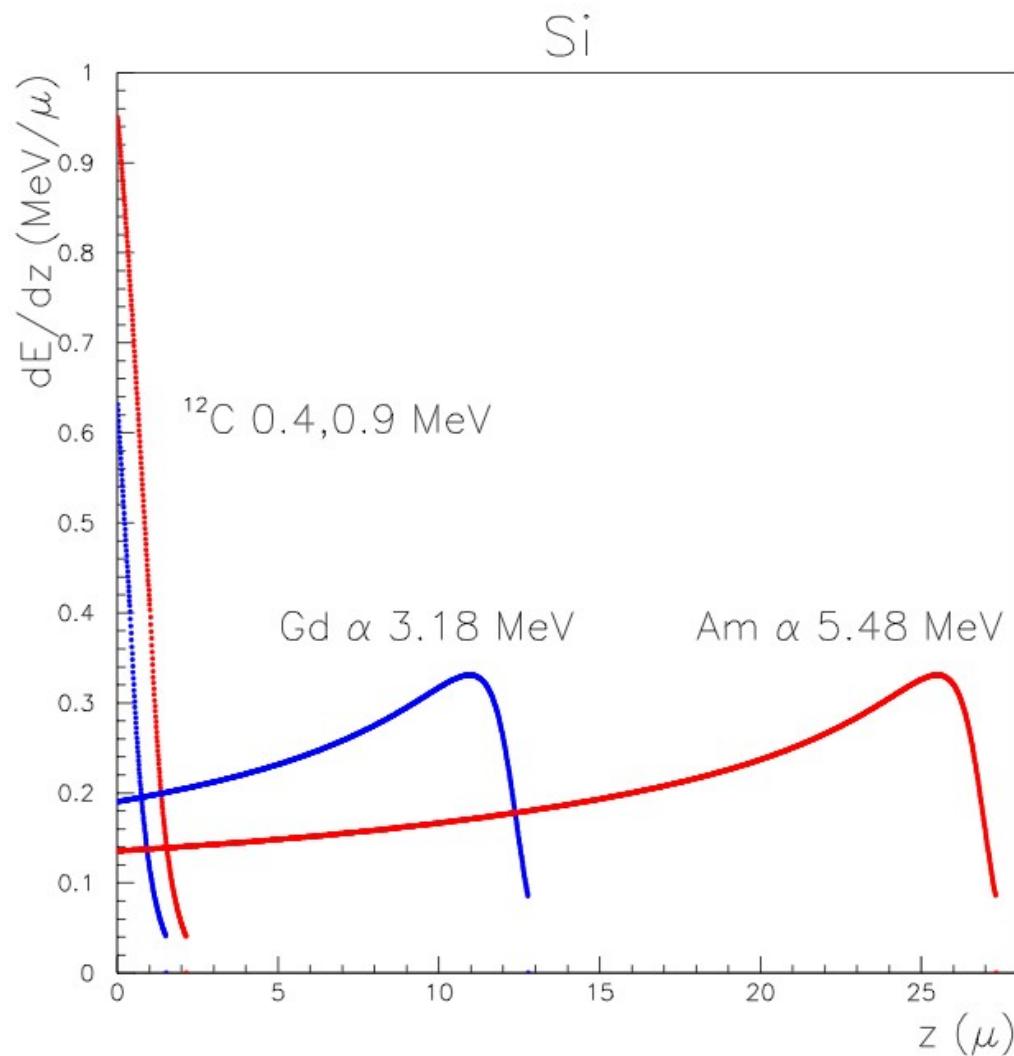


## dE/dz vs. z:

- initial  $E_{\text{init}}$
- $dE/dz @ E_{\text{init}}$  interpolate table values;  $E_c < 200 \text{ keV}$  extrapolate lowest measurement linearly  $\rightarrow (0,0)$
- iterate in 10 nm steps
- quit when  $E < 20 \text{ keV}$

# $^{12}\text{C}$ & $\alpha$ energy deposition in Si

- $^{12}\text{C}$  & Gd,Am  $\alpha$ 's:



- $^{12}\text{C}$  zoom:

